



Study finds radioactivity around Los Alamos largely due to natural sources

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LOS ALAMOS, New Mexico, December 10, 2008—A recent study that assessed levels of radioactivity near Los Alamos National Laboratory confirmed that nearly all measured radioactivity in the area is due to natural sources. Findings also confirmed that radioactivity measured in Embudo Valley, Picuris Pueblo, Llano, and Trampas Lake could not have come from LANL.

The study, which was conducted in August 2008 by scientists in the Environmental Programs Directorate at Los Alamos National Laboratory, was subsequently peer reviewed externally by scientists at Colorado State University and internally within the Laboratory.

Though the LANL study largely confirms data published in a July 2007 report by the Government Accountability Project (GAP), LANL conclusions differ. GAP is a watchdog group that claimed to have found “elevated and potentially harmful levels of radioactivity” in environmental samples collected in areas around the Laboratory. The

GAP report also alleged that some of the radionuclides were “man-made and most likely were generated at the Los Alamos National Laboratory.” At the same time, the GAP report acknowledged the need for a more comprehensive study.

Laboratory scientists collected environmental samples from areas previously sampled by GAP researchers. The samples were analyzed by an independent laboratory in Colorado.

Although the data generated by the LANL study mostly confirmed data from the GAP project, they did not support the watchdog group's interpretations, said LANL scientist Michael McNaughton.

The LANL analysis shows that 99 percent of the measured radioactivity and almost the entire dose received by Los Alamos residents are natural. Less than 1 percent is due to global fallout resulting from worldwide early-stage nuclear weapons testing. Where the LANL study found a contribution from the Laboratory, it was also less than 1 percent.

According to McNaughton, concentrations of radioactivity in soil depend on various factors, such as altitude, rainfall, snowfall, the permeability of the soil, and the shape of the terrain. Levels of radioactivity in the Los Alamos area are, in part, the result of the area's high elevation. A study conducted at Colorado State University indicates that concentrations at high elevations in Colorado are larger than the ones found at similar elevations in New Mexico, he said.

In the few cases where LANL activity has contributed to the results, the dose received by area residents was much less than 1 percent of the regional total and does not constitute a health hazard, McNaughton said.

The study also confirmed that radioactivity detected in the vicinity of Embudo Valley, Picuris Pueblo, Llano, and Trampas Lake could not be attributed to LANL. Scientists were able to rule out the only two potential natural transportation routes from the Lab—by water or by air—as these communities are all located upriver from Los Alamos, and air monitoring programs from LANL and others have not detected airborne contamination more than 1 mile from the boundaries of Los Alamos County. The observed radionuclides—strontium-90, cesium-137, plutonium, and americium—were found to be due to historical global fallout.

In addition to this specialized study, LANL maintains a comprehensive environmental monitoring program to ensure that any potential contamination releases are detected.

For more information, go to <http://www.lanl.gov/environment/compliance/env-rad.shtml>.

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